

Serial No. 10/688,714
Amdt. dated March 17, 2005
Reply to Office Action of December 17, 2004

Attorney Docket No. CS23196RL

Amendments to the Specification:

Please replace the paragraph of the Abstract beginning at page 14, line 3, with the following amended paragraph:

In block 406, the received waveform is operated on with the ALOE filter to alternately linearly equalize the burst of data to provide an estimate of the desired signal. Optionally, the operating step includes a substep of multiplexing the real and imaginary components of the received signal upon entry to the filter. In step 408, the ALOE filter output samples are processed to generate log-likelihood ratio ("LLR") values. These LLR values of the desired signal are then evaluated to determine whether they are satisfactory based upon a predetermined requirement in block 410. Examples of the predetermined requirement in block 410 include a preselected fixed number of iterations, comparison of current LLR values to previously obtained LLR values, or any other relevant conditions. If the resulting estimate is determined to be satisfactory, then the process terminates in block ~~412~~ 410, which could, for example, represent further processing of the LLR values by a forward error correction decoder such as a convolutional code decoder. Otherwise, the resulting estimate of the desired signal is used to generate a vector of 116 log-likelihood ratio ("LLR") estimates corresponding to the burst bits and stealing bits in block ~~414~~ 412. The generated LLR estimates are then evaluated based upon a predetermined condition. A group of N bits, which is a predetermined number, is also selected based upon the predetermined selection condition in block 414. Examples of the predetermined selection condition include, but not limited to, N bits having largest LLR magnitudes; N bits

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having largest LLR magnitudes which are larger than a threshold magnitude; and N bits having LLR magnitudes larger than a threshold magnitude.

Please replace the paragraph of the Abstract beginning at page 23, line 4, with the following amended paragraph:

An iterative method (400) and apparatus (200) for a receiver for reducing interference in a desired signal in a GSM communication system that use uses a finite-impulse-response filter combined with alternate quadrature component output selection for alternate linear equalization. ~~are disclosed~~ The method includes inputting a burst of data of a received waveform including interference, training an alternate linear output filter with a midamble of known quadrature phase, providing an estimate of the desired signal by operating on the received waveform with the finite-impulse-response filter, generating log likelihood ratio estimates for a plurality of bits in the burst of data, selecting bits from the burst of data base upon a predetermined condition, and re-training the alternate linear output filter to provide a second improved estimate of the desired signal.